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Fredrickson Takes Leave from Hughes Institute

A Grand Puzzle at Biggest Biomedical Foundation

In cryptic fashion worthy of its eccentric founder, the Howard Hughes Medical Institute (HHMI) has curtly announced the sidelining of its President, Donald S. Fredrickson, one of the most influential and respected figures in the life sciences.

Why he went off—on April 20, as it turns out—from the world's richest private lode of research money was not disclosed. Fredrickson, 62, became head of the $5-billion enterprise in 1984, following a career that included six years as Director of the National Institutes of Health. He has remarked that HHMI provided the professional satisfaction of NIH without the political headaches.

All that was said by Hughes after word of Fredrickson's departure had leaked out was that he had taken an "extended leave of absence" and that the HHMI trustees were conducting "a review of certain administrative practices in Bethesda during the past two years." Fredrickson has not commented.

The paucity of verifiable details has stirred the biomedical segment of the Washington rumor mill—and the main item being worked over is that the HHMI Board of Trustees was offended by what it regarded as lavishness in entertaining and decorating of the two and a half floors of rented offices that HHMI moved to in Bethesda, Md., in December. Fredrickson's wife, though not a member of the HHMI staff, is said to have been centrally involved in esthetic and social activities on the HHMI premises.

One elder statesman of science told SGR that it is his impression that Fredrickson will not be returning to

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SSC: Tracking the Salesmanship As Congress Ponders the Costs

Two flimsy contentions underpin the hardsell campaign that the Administration and the high-energy Mafiosi are waging for Congressional approval of the Superconducting Super Collider (SSC): First, that the $4-billion-plus accelerator will improve American industrial competitiveness; second, that the project will receive substantial foreign support. There's no evidence to support these claims, while there is much that conflicts with them. When challenged, the pro-SSC gang talks louder and makes many slips along the way—as evidenced from these items collected by SGR from the phenomenal push to stampede Congress into approving the machine.

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Energy Secretary John S. Herrington, February 10, 1987, announcing the go-ahead for the SSC:

"With [the SSC's] future rides our hopes for a better understanding of the mysteries of science, for world economic competitiveness, for scientific leadership, for the next wave of technology and for the generations of American scientific pioneers to come." Herrington's statement, to a press briefing, was accompanied by a DOE press release, "Benefits of High Energy Physics Research," which stated: "Past investments in studies of the interior of atoms have been repaid hundreds of times over in terms of new knowledge, new technologies, new jobs, national security, advances in medicine, and financial returns to the Treasury."

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In Brief

Academic spending on R&D hit a record $10.5 billion last year. That works out to an average real increase of 8 percent per year over 1984-86, double the rate of 1977-84, NSF reports. The increase was attributed mainly to federal spending on campus, though industrial money for university-based R&D was up, too, as was expenditure of the universities' own money. These figures and others are in Highlights Report NSF-87-302, four pages, no charge, available from NSF, Division of Science Resources Studies, 1800 G St. NW, Washington, DC 20550; tel. 202/634-4622.

Also from that NSF address—a new tabulation of industrial spending on biotechnology R&D: $1.1 billion in 1985, for a one-year increase of 20 percent. Scientists and engineers "primarily employed on biotechnology R&D programs" increased by 12 percent, from 4560 in 1985 to 5120, says the study—Highlights Report NSF-87-304.

***Issues*, the quarterly policy journal of the National Academy of Sciences, has indeed found an angel—the University of California, which has agreed to provide $150,000 a year for three years to keep it going, after the NAS announced plans to end publication this summer. The publication will remain housed and owned by the Academy, which is now looking for editors to replace those who dispersed following the termination announcement.**

Scheduled for September 10-11: An NIH Technology Assessment Workshop on "Health Benefits of Pets." For information: Sharon Feldman, Prospect Associates, 1801 Rockville Pike, Suite 500, Rockville, Md. 20852; tel. 301/468-6555.

. . . Still Searching for that Foreign Participation

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James A. Krumhansl, Vice President, American Physical Society, Professor of Physics, Cornell University, formerly a senior NSF administrator and a Director of Allied Chemical Corp., letter to Herrington, dated February 19:

". . . in the last 30 years, I have not seen that particle physics has made any substantive contribution to technology generally, nor energy science and technology specifically . . . . This investment will do nothing, either, to improve our scientific, technological, or industrial competitiveness. In fact, unless the many other important areas of engineering and science are restored to adequate funding levels, the commitment of the amount of money contemplated for the SSC project will certainly have a damaging negative effect nationally."

Edwin L. Goldwasser, Associate Director, SSC Central Design Group Directorate, to Krumhansl, letter dated March 26, copies to Herrington and SSC backers:

". . . I cannot understand any physicist embracing the view you have expressed in your letter. I have a number of good friends, all of whom I respect enormously, who take thoughtful positions opposing the SSC . . . However, I doubt that any of them have formed their judgments primarily on the ground that they 'have not seen that particle physics has made any substantive contribution to technology generally, nor energy science and technology specifically.' Are those the principal motivations for doing physics? I don't think so . . . . "

DOE Secretary Herrington, at February 10 press briefing:

"International cooperation is important for a project of this magnitude. They're too expensive for one country to do them . . . . I wouldn't be surprised if we could get anywhere from a quarter to 50 percent of this project [from other countries]."

White House Science Adviser William R. Graham, exchange with Senator William Proxmire on foreign cost-sharing for the SSC, at March 13 hearing of the Appropriations Subcommittee for HUD-Independent Agencies:

Proxmire: Do you have any commitment [for foreign contributions to the SSC?]

Graham: Not today, Senator. We are just beginning with the process of formal discussions with countries around the world. However, we do have several statements of strong interest in participating in that, in the construction as well as in the operational and scientific phase.

Volker Soergel, Director, German Electron Synchrotron Laboratory (DESY), Hamburg, April 7, testimony to the House Science, Space, and Technology Committee:

"For financial collaboration, I am not as optimistic . . . that a sizable amount of money for these big projects can come from abroad . . . . [The] funds which we can possibly hope to get will certainly be needed to finish the HERA facility [a major project at the DESY laboratory] . . . . I think our country pays its share to the international community with this facility, and I believe this is probably also true for other countries."

Alvin W. Trivelpiece, Director, DOE Office of Energy Research, exchange with Rep. Sherwood L. Boehlert (R-NY), at April 7 hearing of House SS&T Committee:

Boehlert: Are you aware of the Canadian interest in participating in this project?

Trivelpiece: Certainly. I've met with several representatives from Canada.

Boehlert: . . . I get the distinct impression that there is strong opposition within the [Energy] Department to any joint venture with our friends in the north . . . . If the Canadians are interested, as indeed they are, why should they be foreclosed from participation?

Trivelpiece: . . . the intent is to offer to them or to invite from them what it is they would propose to do . . .

Boehlert: How about a transboundary site?

Trivelpiece: Well, that was a different matter . . . . What we decided, or what was decided by the [DOE] Secretary, was in fairness to all, that the physical boundary of the site should be within the continental United States.

Boehlert: For what reason?

Trivelpiece: In order to not have an advantage accrue to a border state that would not be available to an interior state.

Boehlert: How about an advantage to the taxpayers?

Trivelpiece: We are concerned with trying to make a site selection process in which the perception and reality and fairness to all states is preserved and [we] believe that would not be preserved if we permitted, either on the northern border or the southern border, a trans-

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Editor and Publisher
Daniel S. Greenberg

Associate Publisher
Wanda J. Reif

European Correspondent
Francois Seguier (Paris)

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House Committee Urged to Postpone Start on SSC

Denouncing the gestating Superconducting Super Collider (SSC) as "a machine out of synch with the times," two House members influential in research affairs, Buddy MacKay (D-Fla.) and Don Ritter (R-Pa.), have urged an unspecified delay for the multi-billion-dollar project.

In a joint letter May 6 to fellow members of the Science, Space, and Technology (SS&T) Committee, they specifically suggested a halt of "a year or so" to explore the implications that recent developments in superconductivity might have for the SSC. But the overall thrust of their critique was in the direction of an indefinite hold on the project. In support of their call, they also cited concerns that the SSC would impinge on budgets for other fields of science. And they noted opposition within the scientific community, as well as claims that the SSC budget would be better spent on improving industrial technology.

The SS&T Committee writes legislation for the Department of Energy, which is both the bankroll for the project and its political promoter on Capitol Hill.

The two Congressmen stated that they would "support the merits of the SSC project if we had unlimited resources. However, there are pressing needs for smaller science and the need to relate that science more towards our technological and manufacturing competitiveness in so many critical areas."

The letter comes at a time when the Administration and the high-energy physics community are encouraging intense pursuit of the SSC by scores of regional and state boosters as a device for stifling debate of its merits. Further discussion of the SSC's timing and relative importance to American science might not affect the ultimate Congressional outcome, since the pursuers are tacitly agreed that there's got to be an SSC if one of them is to get it. But the fact is that the SSC juggernaut isn't running as smoothly as its backers would like. The MacKay-Ritter call for a slowdown is a troublesome development for the SSC.

MacKay, an attorney from Ocala, has been heavily involved in research-related matters since first coming to Congress in 1979. He was appointed last month to head the newly created Task Force on Technology Policy—an offshoot of the SS&T Committee, of which he is an active member. In addition, he is a Co-Chairman of the Congressional Competitiveness Caucus, which has some 190 House and Senate members, and is a member of the Congressional Clearinghouse on the Future, and various other Congressional appendages concerned with technological affairs. Though low in seniority, MacKay has made an early mark as a serious and attentive legislator on R&D issues.

Ritter, a fifth termer from the Allentown area, is one of the very few members of Congress with professional scientific credentials. He holds an Sc.D. from MIT, and spent 1969-78 at Lehigh University, where he was a professor of metallurgy and manager of research program development until he entered Congress. Active as any minority member of the SS&T Committee, he is Chairman of the Republican Task Force on High Technology and Competitiveness—which sponsored a long afternoon of professorial discussions on April 30 on the commercial and defense implications of developments in superconductivity.

Stating that the SS&T Committee "will soon be faced with funding decisions" on the SSC, the two Congressmen urged their colleagues "to oppose

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Supercolliding Claims

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boundary site, plus it would add costs because of the natural problems associated with security and the like.

Boehlert: Add costs? It is my understanding that if we did have a venture with Canada, it would significantly decrease costs, not add costs. I don't quite understand.

George E. Bradley Jr., DOE Principal Deputy Assistant Secretary for International Affairs and Energy Emergencies, exchange with Rep. James Sensenbrenner Jr. (R-Wisc.) at May 7 hearing of the House Subcommittee on International Scientific Cooperation, of the Science, Space, and Technology Committee

Bradley [in a prepared statement]: To date we have had preliminary and informal discussions on the project with our Western allies and have received some favorable but unofficial expressions of interest. [In response to questions, Bradley stated that US embassies have been assisting DOE in the quest for foreign support].

Sensenbrenner: Who are our embassy personnel contacting? Energy agency officials, cabinet officials, parliamentarians, ministers . . . . ?

Bradley: . . . . all of the above. What we've actually asked them to do, is identify who are the key decision makers within the foreign countries . . . . and having identified those key decisionmakers, to determine their level of interest.

Sensenbrenner: Have the decisonmakers been approached yet?

Bradley: In some cases, some of the decisionmakers have been approached. But we're not comfortable or confident at this stage . . . that all the decisionmakers have been identified. We don't feel that we have a clear picture in any given country in terms of who the decisionmakers are.

Technology Task Force Members, Staff Appointed

Members and staff have been selected for the Task Force on Technology Policy established in this Congress by the House Science, Space, and Technology Committee (SS&T). If it proceeds along the lines of a predecessor on science policy, it will be a marathon of public hearings and commissioned studies on virtually all aspects of federal involvement in the development and application of technology.

The Chairman of the Task Force is Rep. Buddy MacKay (D-Fla.). Democratic members are: Tom McMillen, Md.; David E. Price, NC; Jimmy Hayes, La.; Doug Walgren, Pa., and Robert A. Roe, NJ (*ex officio,* as Chairman of the full SS&T Committee).

Republican members: Ron Packard, Calif.; Tom Lewis, Fla.; Paul Henry, Mich.; Constance Morella, Md.; and Manual Lujan, NM (*ex officio,* as Ranking Minority Member).

Harold Hanson, the SS&T Executive Director, will also hold that title with the Task Force. Ronald Williams has been appointed Study Director, with Doug Thompson as head of staff for the minority members. Other staff members are Pat Garfinkel, of the SS&T staff, and three Congressional Fellows: Steinmar Dale, from the Oak Ridge National Laboratory; Kevin Kennedy, AT&T Bell Labs, and Iris Rotberg, NSF.

Also assigned to the technology study are SS&T staff members John Holmfeld, Christine Wegman, and Terese McDonald. In addition, Christopher Hill, of the Congressional Research Service, will assist the study.

A schedule of studies and hearings is being worked out. The Technology Policy Task Force has offices in Annex 1, Room 820, US House of Representatives, Washington, DC 20515; tel. 202/225-1062.

The technology study is a follow-on to a science-policy task force that wound up last year following two years of studies and hearings on federal relations with science, mainly of the fundamental type in universities. For a complete list of the 37 volumes of studies and hearings produced by the science task force, with ordering information, see SGR March 1, 1987.

Sen. Pell Hosts a Spoonbender

At the invitation of Senator Claiborne Pell (D-RI), Chairman of the Senate Foreign Relations Committee, Uri Geller, of TV spoonbending renown, met on April 24 in a secure room in the Capitol Building to discuss psychic phenomena and related matters with some 25 invited guests from Congress and the Executive Branch.

The contents of the meeting have not been revealed, but one report has it that Geller spoke about "psychotronics" and other "psi" techniques that might be used to probe or even influence the minds of faraway people. There is no dearth of people loose in Washington who take this stuff very seriously.

Geller, in the US on a book-promotion tour, was introduced to Pell last year in London "by a member of the Royal family," according to a Congressional aide, Scott Jones, who assists Pell on psi-related matters.

. . . SSC Opponents Cite Reservations in Scientific Community

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funding initial construction costs for FY 1988. While the construction funding request is only $10 million," they wrote, "it is the proverbial camel's nose under the tent. Construction in FY 1988 would commit us to a $4.4 billion project," they wrote, adding: "Further to proceed with construction funding at this time doesn't make sense, given that the final site will not be selected until July of 1988. Following on recent breakthroughs in superconductivity, a number of scientists have urged us not to move precipitously if indeed superconducting magnet technology can be revolutionized. We may know a lot more in just a year or so."

The MacKay-Ritter letter quoted three scientists who have publicly expressed concerns about the economic bite the SSC would take from federal support for basic science—Philip W. Anderson, Nobel Laureate Professor of Physics at Princeton; Sheila Widnall, of MIT, who is President of the American Association for the Advancement of Science, and James Krumhansl, Professor of Physics at Cornell.

"While the SSC may win more Nobel prizes for American scientists," the letter concluded, "ask yourself: Who leads in the race to bring new science and technology to the marketplace? Japan wins far fewer Nobel prizes per capita than does Great Britain or the United States. Nobel prizes are wonderful, they are a national treasure, but the challenge to America today is to beat the global competition by speeding up our commercialization of new science, not vast new 'big science' investment."

Enclosed was a *New York Times* editorial of April 28, which counseled that the SSC "is not as urgent as the Manhattan Project or finding a cure for AIDS." It concluded, "The supercollider is worth building, but it doesn't have to be built in a crash program. No one yet knows if magnet wire can be made out of the new superconductors. Without more light on that question, it seems rash to start digging . . ."

Reagan (!) Urges Blacks to Pursue Science Studies

Like a shoreline kibitzer recommending buoyancy to a drowning man, the President recently advised blacks to become "part of the great technological and scientific changes sweeping our country and the world." That's where the jobs are, he said.

The advice, delivered on Mr. Reagan's first visit to a historically black campus, Tuskegee University, was flawless. That's evident from the help-wanted ads. But the presidential advice was also detached from the cruel facts of black progress in joining the ranks of science and engineering. And a lot of the cruelty originated in Reagan's own policies.

When his administration first took office, blacks were experiencing healthy gains in reversing the educational neglect that had long restricted their entry into science and engineering. Between 1973 and 1983, the number of blacks with PhDs in science or engineering rose from 2000 to nearly 5000—more than double the rate of growth in the ranks of white PhDs.

True, even with those gains, blacks remained seriously underrepresented in the technical professions. They held over 10 percent of the jobs in the country in 1982, but constituted only 2.6 percent of the nation's scientists and engineers. Nevertheless, the trends were right—portending, if they continued, an ongoing improvement in black educational attainments.

But the trend didn't continue. Black enrollments in science and engineering have tapered off and may even be bound for a nosedive. Noting the underrepresentation in those fields of both blacks and hispanics, a new manpower analysis from the National Science Foundation observes that "black enrollments have been declining since 1981." (*The Science and Engineering Pipeline*, 24 pages, no charge, available from NSF, Division of Policy Research and Analysis, Room 1233, 1800 G St. NW, Washington, DC 20550; tel. 202/357-9689.)

The healthy pre-Reagan growth of black college enrollments may have ended right across the board—not just in technical fields, according to the Washington-based

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. . . Agreement with IRS Calls for High Level of Expenditures

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HHMI. An HHMI spokesman said that Fredrickson was on leave at his own request; also that it was expected that the Board would complete its review by the end of May. In the meantime, the HHMI presidency is being filled on an acting basis by George W. Thorn, Chairman of the Trustees; Thorn, Professor emeritus of Medicine at Harvard, has long been associated with the Hughes operation.

While HHMI is sorting out its leadership, it also faces heavy pressure to belt out huge quantities of money, or pay severe penalties under an agreement it reached last March with the Internal Revenue Service. Half-again as rich as the Ford Foundation, which is number two on the philanthropic scale, HHMI has quadrupled its staff, to about 120, in the past 18 months to handle its portfolio and meet the disbursement requirements. The pace is said to be frantic.

Founded in 1953 by Howard Hughes, and endowed as the sole owner of shares in the Hughes Aircraft Company, HHMI was long assailed by IRS as an illicit tax shelter for the screwy, hermitic billionaire, who died in 1975. Though widely referred to as a foundation, HHMI was organized under the tax code as a medical research organization—a central funding source for Hughes laboratories at a score of universities and research hospitals around the country. These facilities were the only beneficiaries of the wealth generated to HHMI by its shares in Hughes Aircraft, and HHMI wasn't spending very much on them. Research disbursements in the first decade totaled a mere $6 million.

In 1984, the year Fredrickson became Director, HHMI, under renewed pressure from IRS, sold Hughes Aircraft to General Motors for $5 billion—thus establishing a previously lacking marketplace value for its endowment; this, in turn, provided a scale for determining whether HHMI was meeting tax code requirements of minimum disbursements by non-profit philanthropic organizations.

In March of this year, HHMI and IRS struck a deal under which HHMI made a one-time payment of $35 million to IRS, agreed to annual disbursements of 3.5 percent of its endowment to Hughes research facilities, plus expenditures of $500 million over 10 years on new programs including "public understanding of science, and preparation of young people for careers in science" (SGR March 15, 1987). The IRS-HHMI agreement called for a month-by-month tabulation of the endowment—which has been broadly invested—and a penalty of 2 percent per year if the prescribed spending pace of 3.5 percent plus an average of $50 million a year over a decade is not met. With the endowment now estimated at $5.2 billion, the trustees and staff are openly anxious about keeping the check-writing machines humming while HHMI's mysterious leadership problem remains unsettled.

In Print: Energy, Lobbying, Peer Review, and More

The following publications are obtainable as indicated—not from SGR.

• ***Energy R&D: Changes in Federal Funding Criteria and Industry Response*** (GAO/RCED-87-26, 69 pages), report by the General Accounting Office, prepared at the request of Rep. Philip A. Sharp (D-Ind.), Chairman of the Energy and Commerce Subcommittee on Fossil and Synthetic Fuels, examines industry's response to the Reagan Administration's slashing of Department of Energy applied energy research programs and concludes that, contrary to the Administration's stated expectations, "There is little indication that the private sector has compensated for cutbacks in DOE R&D." The report also states, "Reduced DOE and industry support for energy R&D has delayed US technology development."

• ***Tax Administration: Information on Lobbying and Political Activities of Tax-Exempt Organizations*** (GAO/GGD-87-32FS, 22 pages), GAO report, prepared for Rep. J. J. Pickle, Chairman of the Ways and Means Subcommittee on Oversight, briefly describes the groundrules applicable to the 841,966 "tax-exempt organizations in categories most likely to engage in lobbying and or political activities . . . "

• ***University Funding: Information on the Role of Peer Review at NSF and NIH*** (GAO/RCED-87-87FS, 51 pages), report of a GAO study spawned by ancient Congressional concerns that the grant system is rigged against the have-nots; describes peer review as a "controversial . . . inexact, subjective process," but notes that it "has been continually and overwhelmingly endorsed as the best method of assuring that the best research is funded." Peer review is integral to the award system of the two agencies, GAO reports; NIH depends on around-the-table panel reviews, while NSF uses the mails and panels. On the politically sensitive issue of "geographic balance" as a criterion, GAO reports that NSF considers it, while NIH doesn't. The study was ordered in 1985 by Senator Mark Hatfield (R-Oregon) before Democratic recapture of the Senate deposed him as Chairman of Appropriations.

The GAO reports are available without charge from GAO, PO Box 6015, Gaithersburg, Md. 20877; tel. 202/275-6241.

• ***Research & Development FY1988, AAAS Report XII*** (301 pages), papers prepared for the April 9-10 American Association for the Advancement of Science annual

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. . . NSF Programs to Aid Minorities Quickly Axed by Reagan

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Commission on Professionals in Science and Technology, which monitors employment trends in those fields. Among blacks ages 18 to 24, enrollment in higher education actually dropped a bit between 1979 and 1985, to 19.7 percent of the age group; in the same period, enrollments of whites rose from 25.6 percent to 28.7 percent.

What accounts for the declining pace of black progress in science and engineering? A large part of the answer is that the Reagan Administration severely reduced or eliminated federal programs that helped many blacks reach these professions. At NSF, which was the centerpiece for such programs, the hit list included the Minority Institutions Science Improvement Program and the Student Science Training Program—both of which were focused on encouraging minorities and women to study science and engineering. Reductions in student aid have also hit hard at black educational aspirations.

With federal assistance programs going down the drain, Congress, in 1981, wrote a provision into the NSF Act requiring the President to propose a national plan "for the promotion of equal opportunity for women and minorities in science and technology." The White House never replied. But NSF did, with what the Congressional Office of Technology Assessment describes as an attempt "to rationalize budget cuts in a number of programs that were created in the 1970s" to encourage black science and engineering students. Shortly after that, the Administration terminated the education division at NSF, claiming it wasn't needed. Under Congressional pressure it was resurrected—and then cynically cited by the White House as evidence of its concern for education.

So, the barriers to black entry into science remain high. The derelict state of science education in ghetto schools is compounded by the paucity of assistance for minority science education at the college level. Science is the most difficult field for making up lost time—but the college programs of the 1970s demonstrated that, with encouragement, many students could do it. Some remnants of those programs survive, but, by and large, they are gone, and so are chances for many students who would have benefited from them.

The President gave sound advice to his Tuskegee audience: Get trained in science and engineering and you can get ahead in modern America. Unfortunately, many who could have profited from that advice are the victims of Reagan's policies.—DSG

. . . Plus Bio Diversity, Social Science Funds, Etc.

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meeting on the proposed federal R&D budget for the coming year. Provides fine details on an agency-by-agency basis, as well as by major disciplines.

$13.50 for AAAS members, $16.50 for others; AAAS, Sales Office, 1333 H St. NW., Washington, DC 20005; tel. 202/326-6404.

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• ***Technologies to Maintain Biological Diversity*** (GPO Stock No. 052-003-01057-7, $15, 334 pages), major report by the Congressional Office of Technology Assessment, states that "diversity is being reduced at a rate that is likely to increase over the next several decades," and that the change "may have serious consequences for civilization." Among the options offered by OTA for Congressional consideration: Require federal agencies "to make maintenance of biological diversity an explicit consideration in their activities," a program for conservation biology in the National Science Foundation, a National Endowment for Biological Diversity, and use of foreign aid to promote biological diversity.

• ***Wastes in Marine Environments*** (GPO Stock No. 052-003-01062-3, $13, 312 pages), another big one from OTA, warns that estuaries and coastal waters have been seriously degraded by pollution and that additional damage will occur unless stricter and more effective control techniques are instituted; also notes that the "health of the open ocean generally appears to be better" than that of closer-in waters, but "Considerable uncertainty still exists . . . about the ability to discern impacts, particularly long-term ones, that may have occurred in the open ocean."

• ***Technology Dependent Children*** (GPO Stock No. 052-003-0106-8, $4.75, 105 pages), an OTA "technical memorandum," requested by the Senate Labor and Human Resources Committee and its House counterpart, Energy and Commerce, reports that complex technology sustains the lives of up to 17,000 disabled children, mostly in hospitals. Many such children, OTA reports, could be properly cared for in home settings, but third-party payment programs generally exclude that option. The OTA report was released by the Task Force on Technology Dependent Children, created by Congress last year to explore alternatives to hospital-based care.

The OTA reports are available, at the prices listed, from Superintendent of Documents, USGPO, Washington, DC 20402; tel. 202/783-3238.

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Guide to Federal Funding for Social Scientists (382 pages), prepared by the Washington-based Consortium of Social Science Associations (COSSA), this is a model compendium of what money hunters need to know about federal programs that underwrite research and training—the agencies' topics of interest, budgets, examples of recently funded projects, names, addresses and phone numbers of officials. Included are essays ("Some Inside Views") by staff members at the three federal mainstays of the social and behavioral sciences, NSF, NIH, and the Alcohol, Drug Abuse, and Mental Health Administration. But all the other supporting agencies are in the *Guide*, too, including a few not widely known as supporters of the social sciences, such as the National Bureau of Standards and the Nuclear Regulatory Commission.

The Guide *is priced at $24.95 for libraries, $14.95 for COSSA members, and $19.95 for others; order from: COSSA, 1625 I St. NW, Suite 911, Washington, DC 20006; tel. 202/887-6166.*

NSF Offers Reports on Japan

The Tokyo office of the National Science Foundation produces reports on science, technology, and education in Japan, which are available without charge from: NSF, Division of International Programs, Special Programs Section, 1800 G St. NW, Washington, DC 20550, attn. Mildred Bosilevac; tel. 202/357-7494.

The section can provide a list of titles of "Report Memoranda" from the Tokyo office, as well as the reports. Recent titles, and their identifying Memo Numbers, include:

105: "Reorganization of Science and Technology Agency"

106: "Japan's Ministry of Agriculture, Forestry and Fisheries—R&D Budget for Japan Fiscal Year 1986"

107: "Japan's Ministry of International Trade and Industry (MITI)—R&D Budget for JFY 1986"

108: "Japanese Company Support for Academic Research in the US"

109: "Preferential Tax Systems for R&D in Japan"

110: "American Universities' Scientific and Technical Contacts with Japan: Massachusetts Institute of Technology's Industrial Liaison Program and other MIT Contacts"

111: "The Human Frontier Program: MITI's Initial 'Think Piece' on the Nature of the HFP"

112: "FY 1986 Awardees of Monbushio's Grants for 'Specially Promoted Distinguished Research'"

113: "National Inter-University Research Institutes in Japan"

Special: "A Report on the US-Japan Kyoto Conference on High Technology and the International Environment."

In Quotes: The Neglected Bureau of Standards

From testimony April 28 to the House Subcommittee on Science, Research, and Technology, by Lewis M. Branscomb, Director, National Bureau of Standards, 1969-72; Chief Scientist, IBM, 1972-86, and currently Director of the Science, Technology, and Public Policy Program, Kennedy School of Government, Harvard.

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[The National Bureau of Standards] remains a little-known, at least little-discussed, institution, apparently not even worthy of mention in the President's litany of Administration contributions to competitiveness . . . . For years, the technical experts from industry on the Bureau's many technical review panels have urged more Congressional support for the Bureau's basic functions. Critics of "industrial policy" can cite the NBS mode of operation as an exemplar of the right federal posture.

I therefore find it hard to understand why the Bureau has not been more strongly supported by the Executive Office of the President during the last five years. Even more difficult to understand is why the Bureau's Building Research Center and Center for Computer Science and Technology have been so persistently served up for reduction or elimination. Both are excellent examples of technical programs aimed at increasing the private sector's capability to innovate and at helping state and local regulatory authorities remove inappropriate constraints on innovation . . . .

Now is the time for reversal of the Administration's [lack of interest] in scientific and technical information services, which are the mechanisms through which much of the government's R&D investment reaches and services the economic interest of the nation. There has been much handwringing about the skill and speed with which foreign competitors collect and organize information from the open institutions of American fundamental research. It is no less than astonishing that our own government seems content with paying for the research but cares little about organizing access to it by firms and institutions in this country.

Indeed, we should be moving in the other direction—organizing to collect and disseminate open technical information from the research in competitor countries. The Japanese have been urged by the United States to expand their contributions to science. They are going to do it, and do it very well . . . . I welcome the idea of giving NBS more visibility, perhaps even a new name. I also welcome the effort to institutionalize in Commerce [NBS's parent department] a stronger commitment of departmental attention to matters of science and technology and the idea of pulling several related functions together to this end.

But to be honest with the Committee, I am not optimistic about the results. For I am not persuaded that the leadership of the Department—or even the proposed new Under Secretary of Productivity and Technology—will understand that the Bureau . . . is a scientific institution with important human resources responsibilities. Its products are not easy to measure, or even find. This kind of institution is often frustrating for impatient, business-experienced executives.

The temptation will be to find more quantitative measures of output, to be more formal about the technology transfer arrangements, to prove that these measures are making a direct and immediate contribution to reducing the trade gap . . . .

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